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[54] **BIOCOMPATIBLE MATERIAL COMPRISING A BASE POLYMER BULK GRAFT POLYMERIZED WITH AN ETHYLENICALLY UNSATURATED CARBOXYLIC ACID**

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[58] **Field of Search** ..... 3/1, 1.4, 1.5; 128/92 C, 92 D, 113, 130, 156, 335.5, 348, 349; 210/500 M, 500 R; 424/DIG. 7; 428/421, 422, 413, 425, 447, 451, 483, 507, 508, 515, 516, 520; 433/201

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[57] **ABSTRACT**

A biocompatible surgical device comprises at least at its surface a hydrophilic thermoplastic graft copolymer which is an ethylenic carboxylic acid, selected from acrylic acid and alkyl substituted acrylic acids graft copolymerized onto a base polymer. The base polymer is preferably selected from polyolefins, especially polyethylene and polypropylene, partially and fully fluorinated polyolefins, especially polytetrafluoroethylene and polyetherurethanes.

Graft copolymerization of the monomers to the base polymer is initiated preferably by ionizing radiations, especially gamma radiation. The reaction takes place preferably in an aqueous solution and in the presence of a homopolymerization inhibitor such as ferrous sulphate or potassium ferricyanide.

The base polymer may be graft copolymerized throughout its entire thickness or to a known depth in one or more of its surfaces. The former material exhibits high elastic properties while the latter exhibits a low elasticity and low moduli.

The biocompatible devices described may be in the form of prostheses, especially vascular prostheses, wound dressings, especially in the treatment of skin loss and open wounds, and body fluid contacting surfaces for use in extra-corporeal, body fluid treating devices.

15 Claims, No Drawings